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United States Department of Agriculture.

DIVISION OF CHEMISTRY.

NEEDED REFORMS IN FERTILIZER INSPECTION.

Report of the Committee Appointed at the Preliminary Meeting of Official Inspectors on Fertilizers, held in New Haven, Conn., March 9, 1897, presented by request of the Committee by H. W. Wiley.

Pursuant to a call issued at the instance of Dr. H. J. Wheeler, a meeting of chemists, charged with the official inspection of fertilizers, was held at New Haven, Conn., with a view to consider needed reforms in the methods of fertilizer inspection. At that meeting it was decided, after a general discussion of the subject, to appoint a committee to consider the matter, and, if possible, to obtain a conference of the committee with the association of manufacturers of and dealers in fertilizers in the United States. The committee appointed at New Haven was constituted as follows:

Dr. H. J. Wheeler, of Kingston, R. I., Chairman.

Director, H. P. Armsby, State College, Pa.

Director, C. D. Woods, Orono, Me.

Dr. Harvey W. Wiley, Chief of Chemical Division, Washington, D. C.

Pursuant to a call issued by the chairman of the committee, a meeting was held at the Clarendon Hotel, New York City, N. Y., beginning on Tuesday, May 18, 1897. The meeting of this committee was continued for three days, during which time the subject of needed reforms in fertilizer inspection was fully discussed. Several joint meetings were also held with a committee appointed by the association of fertilizer manufacturers and dealers in the United States. This committee consisted of the following gentlemen: Messrs. Bowker, Bradley, Keogh.

The two committees met simply for conference, neither one of them having authority to take any special action further than was necessary to come to an agreement as nearly as possible on the chief points under discussion. The following points were practically agreed upon by the two committees as being a desirable basis for future action:

(1) All fertilizing materials, excepting stable manures, should be subjected to inspection.

(2) Each package of fertilizing material sold should bear a legible guaranty.

(3) It appears unnecessary to state the number of net pounds in each package.

(4) Each package should bear the brand name, trade mark, and the name and address of the manufacturer.

(5) The quantities of fertilizing ingredients should be expressed in percentages.

(6) The certificates of analysis need not be in the form of an affidavit.

(1) Sealed samples of the fertilizer need not be sent by manufacturers to the inspectors.

(8) Ten per cent of the entire lot of fertilizing material should be sampled in all cases, or if less than ten packages be present all should be sampled.

(9) Duplicate samples should be drawn by inspectors and sealed in the presence of a witness or witnesses.

(10) The percentage of nitrogen should be required and also a guaranty stating the amount of available nitrogen just as soon as methods for its satisfactory determination shall have been adopted by the Association of Official Agricultural Chemists.

(11) Available and total phosphoric acid should be guarantied.

(1?) Potassium should be guarantied as potash (potassium oxid). There was an extended discussion on the desirability of including water-soluble phosphoric acid in the guaranty as a part of the available. There was no agreement upon this point, but it was left open for further discussion in case the committee should come together at a subsequent time to consider again the matter in a more authoritative way.

A point which excited a great deal of distributed in the meeting of the two committees was that in regard to the extenses of fertilizer control. It was contended on the that no difference how a tax might be levient for defraying the expenses of inspection, it would be in the end paid by the farmers, inasmuch as any additional expense would be charged in the price of the tertilizers. On the contrary, the report was mentioned that fertilizers which in some States are required to pay a tax of 50 cents a ton, were sold to the farmers at precisely the same price as in other States where no inspection tax was levied. It was the general opinion of the committees that a tax should be assessed upon the fertilizers sold, of a magnitude which would fully pay the expense of inspection, but that it would not be a wise plan to attempt to raise a revenue in excess of that expense by such a tax.

It was further suggested that to prevent the undue multiplication of brands a special tax on each brand sold should be collected.

It was the unanimous opinion of both committees that an attempt should be made to unify the various State laws in regard to fertilizer control, and that the best beginning in this direction would be secured by formulating a general law which might be adopted by those States not yet having a fertilizer law, but which may enact one in the near future. Gradually the States which already have laws relating to fertilizer control could be brought to see the advisability of changing their legislation to make it conform to the general principles guiding the stations exercising fertilizer control and the manufacturers of and dealers in fertilizers.

In order that the movement to secure a more uniform method of fertilizer control may have an official indorsement, it was the unanimous opinion of the committee that the matter should be referred to the Association of Agricultural Colleges and Experiment Stations and to the Association of Official Agricultural Chemists, with the recommendation that each association appoint separate committees, or that the two associations appoint a joint committee to continue the further agitation in regard to this matter.

It is suggested, therefore, that the two associations mentioned authorize their respective presidents to confer together and appoint a joint committee, which shall take the place of the present committee, to have authoritative power to act in the matter.

All of which is respectfully submitted.

H. J. Wheeler,

H. P. ARMSBY,

C. D. Woods,

H. W. WILEY,

Committee.

Publication authorized:

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WASHINGTON, D. C., July 8, 2097.

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United States Department of Agriculture,

PROPOSED REFORMS IN FERTILIZER INSPECTION LAWS.

The present edition of this circular contains the resolutions adopted by the Association of American Agricultural Colleges and Experiment Stations and the Association of Official Agricultural Chemists.

At a meeting of official inspectors of fertilizers in New Haven, Conn., March 9, 1897, a committee was appointed to consider reforms in the laws on inspection of fertilizers. The report of this committee was as follows:

Pursuant to a call issued at the instance of Dr. H. J. Wheeler, a meeting of chemists, charged with the official inspection of fertilizers, was held at New Haven, Conn., with a view to consider needed reforms in the methods of fertilizer inspection. At that meeting it was decided, after a general discussion of the subject, to appoint a committee to consider the matter, and, if possible, to obtain a conference of the committee with the association of manufacturers of and dealers in fertilizers in the United States. The committee appointed at New Haven was constituted as follows:

Dr. H. J. Wheeler, of Kingston, R. I., Chairman.

Director H. P. Armsby, State College, Pa.

Director C. D. Woods, Orono, Me.

Dr. H. W. Wiley, Chief of Division of Chemistry, Washington, D. C.

Pursuant to a call issued by the chairman of the committee, a meeting was held at the Clarendon Hotel, New York City, N. Y., beginning on Tuesday, May 18, 1897. The meeting of this committee was continued for three days, during which time the subject of needed reforms in fertilizer inspection was fully discussed. Several joint meetings were also held with a committee appointed by the association of fertilizer manufacturers and dealers in the United States. This committee consisted of the following gentlemen: Messrs. Bowker, Bradley, Keogh.

The two committees met simply for conference, neither one of them having authority to take any special action further than was necessary to come to an agreement as nearly as possible on the chief points under discussion. The following points were practically agreed upon by the two committees as being a desirable basis for future action:

- (1) All fertilizing materials, excepting stable manures, should be subjected to inspection.
 - (2) Each package of fertilizing material sold should bear a legible guaranty.
 - (3) It appears unnecessary to state the number of net pounds in each package.
- (4) Each package should bear the brand name, trade-mark, and the name and address of the manufacturer.
 - (5) The quantities of fertilizing ingredients should be expressed in percentages.
 - (6) The certificates of analysis need not be in the form of an affidavit.
- (7) Sealed samples of the fertilizer need not be sent by manufacturers to the inspectors.
- (8) Ten per cent of the entire lot of fertilizing material should be sampled in all cases, or if less than ten packages be present all should be sampled.

- (9) Duplicate samples should be drawn by inspectors and sealed in the presence of a witness or witnesses.
- (10) The percentage of nitrogen should be required and also a guaranty stating the amount of available nitrogen just as soon as methods for its satisfactory determination shall have been adopted by the Association of Official Agricultural Chemists.
 - (11) Available and total phosphoric acid should be guaranteed.
 - (12) Potassium should be guaranteed as potash (potassium oxid).

There was an extended discussion on the desirability of including water-soluble phosphoric acid in the guaranty as part of the available. There was no agreement upon this point, but it was left open for further discussion in case the committee should come together at a subsequent time to consider again the matter in a more authoritative way.

A point which excited a great deal of discussion in the meeting of the two committees was that in regard to meeting the expenses of fertilizer control. It was contended on the part of the manufacturers that no difference how a tax might be levied on them for defraying the expenses of inspection, it would be in the end paid by the farmers, inasmuch as any additional expense would be charged in the price of the fertilizers. On the contrary, the report was mentioned that fertilizers which in some States are required to pay a tax of 50 cents a ton, were sold to the farmers at precisely the same price as in other States where no inspection tax was levied. It was the general opinion of the committees that a tax should be assessed upon the fertilizers sold, of a magnitude which would fully pay the expense of inspection, but that it would not be a wise plan to attempt to raise a revenue in excess of that expense by such a tax.

It was further suggested that to prevent the undue multiplication of brands a special tax on each brand sold should be collected.

It was the unanimous opinion of both committees that an attempt should be made to unify the various State laws in regard to fertilizer control, and that the best beginning in this direction would be secured by formulating a general law which might be adopted by those States not yet having a fertilizer law, but which may enact one in the near future. Gradually the States which already have laws relating to fertilizer control could be brought to see the advisability of changing their legislation to make it conform to the general principles guiding the stations exercising fertilizer control and governing the manufacturers of and dealers in fertilizers.

In order that the movement to secure a more uniform method of fertilizer control may have an official indorsement, it was the unanimous opinion of the committee that the matter should be referred to the Association of Agricultural Colleges and Experiment Stations and to the Association of Official Agricultural Chemists, with the recommendation that each association appoint separate committees, or that the two associations appoint a joint committee to continue the further agitation in regard to this matter.

It is suggested, therefore, that the two associations mentioned authorize their respective presidents to confer together and appoint a joint committee, which shall take the place of the present committee, to have authoritative power to act in the matter.

All of which is respectfully submitted.

H. J. Wheeler, H. P. Armsby, C. D. Woods, H. W. Wiley, Committee. Subsequently committees were appointed by the Association of American Agricultural Colleges and Experiment Stations and the Association of Official Agricultural Chemists, which conferred upon the subject of fertilizer laws and agreed upon changes which should be made in the interest of uniformity in the several States. The report, signed by H. J. Wheeler, H. P. Armsby, E. H. Jenkins, M. A. Scovell, and C. D. Woods, recommended that State laws should be made uniform on the following points:

- All substances containing nitrogen, potash, or phosphoric acid, sold, offered, or exposed for sale for manurial purposes, excepting the dung of domestic animals when sold as such, should be subjected to inspection.
- 2. Each package of manurial substance as above defined, sold, offered, or exposed for sale, should bear a printed, legible guaranty.
- 3. The number of net pounds in each package should be stated.
- 4. Each package should bear the brand, name, or trade-mark, and the name and address of the manufacturer.
- 5. The quantities of manurial ingredients should be expressed in percentages.
- 6. The guaranteed statements on the packages or forwarded to the inspectors need not be in the form of an affidavit.
- 7. Sealed samples of fertilizers offered for sale need not be sent by the manufacturers to the inspectors.
- 8. In lots of five tons or less, samples should be drawn from at least ten packages, or if less than ten packages are present, all should be sampled; in lots of over five tons, not less than twenty packages should be sampled.
- 9. Duplicate samples should be drawn and sealed in the presence of the party or parties in interest, or their representatives, one of the samples to be taken by the collector and the other left with the party whose goods were inspected, subject to the call of the manufacturer.
- 10. Total nitrogen should be guaranteed in all cases, and nitrogen in the form of nitrates or ammonium salts should be guaranteed separately, if the manufacturer desires credit therefor.
- Total phosphoric acid should be guaranteed in all cases, and soluble, reverted, and insoluble, separately, if the manufacturer desires credit therefor.
- 12. Potassium should be guaranteed as potash (potassium oxid) soluble in water
- 13. When chlorin is present in fertilizers, manufacturers shall guarantee the maximum percentage thereof.
- 14. Only statements of the minimum amount of the substances present, except in the case of chlorin, should be made. For example, instead of guaranteeing from 2 to 4 per cent of potash, guarantees should read thus: 2 per cent of potash.
- 15. It should be specified that the methods of the Association of Official Agricultural Chemists should be used for official work.
- 16. An imprisonment clause for violation of fertilizer laws should be omitted.
- 17. Manufacturers should not be obliged to secure bondsmen.
- Commercial valuations should not be affixed to the published analyses of manurial substances.
- 19. A definition of the term "brand" should be inserted wherever a brand tax is assessed.

20. The guarantee should state the ingredients guaranteed, in the following

 Per cent	phos.	aci	d soluble in water.
 4.6	6.4	6 6	reverted.
 6.6	4 6	4.6	insoluble.
 4.4	6.6	6.4	total.
 6.6	nitrog	en	in nitrates.
 6.4	6.6		as ammonia.
 6 6	6.6		total.
 4.4	potash	so	luble in water.
 h 6	chloria	n.	
			H W Wiley

Chief of Bureau.

Approved:

form and order:

James Wilson,
Secretary.

Washington, D. C., March 20, 1902.